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ABSTRACT

The purpose of this paper is to provide the Director of the Office of Education Programs with an instrument with which to develop an educational data base for providing information to evaluate the education programs of the Bureau of Indian Affairs (BIA). Some specific issues and questions are presented along with background information. BIA educational information needs are identified in the following areas: assessment of needs, establishment of goals and objectives, planning for implementation, operation, evaluation, evaluation recycling, and pupil accounting. The proposed technical approach to the development of an education information program includes the utilization of a financial accounting sub-system and a pupil accounting sub-system. Steps suggested for the implementation of these programs are that (1) recoding for the financial management sub-system should be completed early in Fiscal Year 1973, (2) elements of data should be collected in the fall of 1972 and made a part of the permanent pupil record system shortly thereafter, (3) plans should be developed for collecting pupil enrollment and attendance information, (4) plans should be made to administer an appropriate standardized achievement test to all pupils in attendance at Indian schools, (5) work should be done to develop uniform terminology for pupils and curriculum, and (6) work should be begun on standardized evaluation methods. (PS)

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Information Needs

To Support an Evaluation Process

for

BUREAU OF INDIAN AFFAIRS' EDUCATIONAL PROGRAMS

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INFORMATION NEEDS TO SUPPORT AN EVALUATION PROCESS FOR BUREAU OF INDIAN AFFAIRS EDUCATIONAL PROGRAMS

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A Report Prepared for
The Division of Internal Services
The Division of Evaluation and Program Review
Office of Education Programs
Bureau of Indian Affairs

Washington, D. C. 20242

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I - FOREWORD

A study was recently undertaken to assess the prospects for development and implementation of an evaluation program for the Bureau of Indian Affairs Educational Programs operation. This program would follow the guidelines as established by the Department of the Interior.

In the course of the investigation, a critical deficiency was identified in the collection, storage, and dissemination of BIA educational data. Likewise, the basic information requirements needed to specify needed data to produce usable reports were almost nonexistent. In some instances, usable information was available but in a form or level of detail inappropriate for specific evaluative processes.

The content of the report that follows is important to the underlying need for a uniform reporting process. The results are presented to demonstrate the need for a reporting process as a basis for an evaluation process.

From all viewpoints, the requirements for a definitive reporting process that will provide useful, decision-making information at the school, agency, Area, and Central Office are evident. A process for standardized terminology and data uniformity is the first step toward establishment of a useful information-gathering device.

Since the most basic comprehensive data collection approach has not been implemented, an evolutionary process based on a manual rather than an automated system appears to be most viable at this time. This might well be termed a growth plan for development of a comprehensive

educational information program. The evidence presented in this report supports such a consideration.

II - INTRODUCTION

Department of the Interior guidelines for evaluating programs were released in the fall of 1971 allowing each of the individual Bureaus to develop and implement appropriate evaluation techniques and approaches. Planning responsibility for a Bureau of Indian Affairs evaluation program was assigned to the Chief of Management Research, now reorganized into the Office of Management Systems. To date, no formal action has been taken by the Bureau of Indian Affairs to develop an organized evaluation program.

Present efforts to evaluate programs for the education of Indian children by the Bureau of Indian Affairs have been reviewed and assessed. This process has been, of necessity, limited in time and scope of effort. The method of approach to identifying basic needs of an educational program evaluation design has been developed. Because of the time and cost constraints which were forced on this effort, an involved background search was not feasible. A representative literature search was undertaken to review the efforts of others in this area. Additionally, a conference with an investigative team of the General Accounting Office, which has studied various aspects of the Bureau of Indian Affairs educational program, was arranged in Los Angeles. This discussion with GAO study team members regarding their findings provided the means for rapid development of this report.

Specifically, the purpose of this treatise is to provide the Director of the Office of Education Programs with an instrument with

which to develop an educational data base for providing information to evaluate the Bureau's education programs.

III - BACKGROUND

Shortly after assuming the responsibilities of the Office of Education Programs in March of 1971, the Director was called upon to present and defend an educational plan to the appropriate subcommittees of Congress as support for the education budget. At these hearings, the Director had virtually no pertinent supporting information to substantiate his position or to use as background material for answering the many pointed questions addressed to him. Thus, the urgency for this necessary information became apparent.

REORGANIZATION OF OFFICE OF EDUCATION PROGRAMS

In the first of many moves to improve the effectiveness and effectualness of the Office of Education Programs, the Director submitted a reorganization plan which was approved by the Department in August, 1971. This plan realigned the many duties and activities of the Bureau's Central Office along functional lines. The major functional units identified were:

- Program Direction and Management
- Policy Development and Legislative Review
- Distribution of Resources
- Education Research
- Program Planning and Development
- Evaluation and Program Review
- School Facilities Planning and Development

- Fiscal Planning and Budgeting
- Communication Services

SIMILARITY TO
STATE EDUCATION AGENCY

It should be noted at this point that the functional units above closely parallel those defined for State education agencies in the U. S. Office of Education publication, Handbook VII, Standard Terminology for State Education Agencies. The Bureau of Indian Affairs is unique among Federal Agencies in that it is directly responsible for the operation of programs normally identified as being within the perview of local government. The responsibilities for operation of local schools by the Bureau of Indian Affairs in such a wide geographical area are awesome and demanding.

BUREAU ORGANIZATION CREATES
PROBLEMS FOR EDUCATION

As has been pointed out, the Central Office of Education has a function very similar to most State education agencies. In this case, the Bureau's "Education Agency" is fitted into an organizational structure totally discordant with any reasonable approach to management structuring. Public schools are generally operated by State constitutional mandate as legal entities under public boards of education, and are governed by the laws and regulations of the State. Bureau of Indian Affairs schools, to the contrary, are grouped under agency officers who report to an area director, who is in line authority to the Commissioner of the Bureau of Indian Affairs. This situation would be analogous in

the public school sector by requiring the Superintendent of Schools to report to the City Manager or a County Commissioner. Local communities decided years ago that the schools should not be required to compete with other public services for finance and favor with city politicians, hence, public schools were placed under the custodianship of boards of trustees.

DIVISION OF EVALUATION AND PROGRAM REVIEW

The newly established Division of Evaluation and Program Review within the Office of Education Programs is a key functional unit. It is the responsibility of this Division to plan, develop, design, and implement the processes and procedures for ongoing evaluations of the Bureau's educational programs. This function is a very important element in the development of information to assist the Director in presenting and justifying priority needs for the education of Indian children. As the Government Accounting Office states in its report developed through a year's study of the Bureau's education programs, millions and millions of dollars have gone into the education of Indian children with virtually no information gained concerning attained educational results.

GOVERNMENT ACCOUNTING OFFICE CRITICISMS

One of the major points made by the study team of the GAO was the fact that stated goals and objectives for Indian education were either nonexistent or, if in existence, universally ignored. Study team members did acknowledge the current Director's efforts to restate Office of Education Programs goals and objectives. A favorable impression of this

activity was indicated by the GAO. In addition to stressing the need for Bureauwide goals and objectives, the GAO pointed out the lack of decision-making information available to program managers and the minimal data available on the measurement of student achievement.

IV - ISSUES AND QUESTIONS

PROGRAM ISSUES

For the past two or three years the need for the development of an educational information system and the implementation of new programs for the measurement of student achievement has been discussed as "Program Issues" in documentation submitted to the Commissioner, Department, and Office of Management and Budget. These issues have been presented as urgent considerations needed to improve Indian education. Concurrent in urgency are standardized testing and MIS programs. The Director of Education Programs' critical objective is to produce demonstrable results.

PROBLEMS ARE NOT NEW TO EDUCATION

On the plus side, many accomplishments have been achieved in the development and design of educational information systems and measurement of student achievement. Products of these accomplishments in the education field are applicable to BIA.

NEED FOR COMMON TERMINOLOGY

One of the first problems to be solved in the development of an educational information system is data uniformity. This requirement was identified in public education as early as 1930 when a group of State education agency representatives met to discuss the issue. In 1953, the first of a series of handbooks of standard terminology was published by the U. S. Office of Education. Handbook I, The Common Core of State

Educational Information, identified and defined those items of information which were common for reporting educational information from the local to the State and national levels. Since then, other handbooks have been developed cooperatively with representation and concurrence by all State education agencies and the majority of local school districts. Handbook II, Financial Accounting for Local and State School Systems, and Handbook III, Property Accounting for Local and State School Systems, were published in 1957 and 1959 respectively. A handbook about employed personnel, Handbook IV, Staff Accounting for Local and State School Systems, published in 1965, was developed concurrently with Handbook V, Pupil Accounting for Local and State School Systems. In 1970, Handbook VI, Standard Terminology for Curriculum and Instruction in Local and State School Systems, was published. At the present time an additional handbook on community profile information is underway. These handbooks, without doubt, will provide a basis for terminology and organization of an educational information system for the Bureau of Indian Affairs.

OTHER SIMILAR PROJECTS

In 1958 with the enactment of the National Defense Education Act, Congress demonstrated, through the provisions of Title X, a concern for the availability of accurate and timely information about education. This title of NDEA, through the U. S. Office of Education, offered matching grants to State departments of education up to $50,000 for the purpose of improving statistical services. Many States used this money for improving systems for collecting, processing, and disseminating data. As

indicated previously, a very important part of most of the State education agency programs was basing the revised reporting procedures on the handbooks of standard terminology. Also, using Title X money, many State education agencies utilized automatic data processing for the first time.

Later, through funds provided under Title V of the Elementary and Secondary Education Act, State education agencies moved to higher levels of statistical sophistication with the development of educational information systems. Thirteen midwestern States joined together to design the Midwestern States Educational Information Project (MSEIP). Individual State education agencies such as Alabama, California, Mississippi, New York, North Carolina, Pennsylvania, Rhode Island, Texas and Puerto Rico spent millions of dollars in the design of the most modern educational information systems.

V - BIA EDUCATIONAL INFORMATION NEEDS

The Office of Education Programs of the Bureau of Indian Affairs recognizes the urgency and the need for an educational information system. Much has already been done in the public sector of education in the development of such systems. Although the BIA, as a Federal agency, presents a unique set of problems in the operation of schools at the local level, a great deal of the work already done by State education agencies can be transferred to the Bureau's school system, since systems designed with Federal funds are part of the public domain.

PROBLEM STATEMENT

The obvious lack of standardized data available to the decision-makers of BIA prevents a desired evaluation outcome. The GAO report has alluded to this problem. The schools which were investigated did not have standardized procedures and practices for accountability. Further, no methods existed for comparing the results or achievements of the Indian schools with each other or with the public schools in the States in which the Indian schools were located.

In the public sector, the people are demanding that educators be held accountable for providing measurable results of student performance. This demand is being exhibited by a reluctance to approve additional taxes to support the ever-increasing costs of education, more participation in school activities, and greater interest in the actual operation of the schools.

Even though the Indian schools are faced with the same basic problem, the magnitude of the problem is somewhat different. The vastness of the territory encompassed by the Indian school operation defies comparison with public schools of any size or shape. BIA funds schools which are located in Alaska to the southern areas of Florida, and from the eastern shores of North Carolina to western California, Oregon, and Washington. This immense area is in itself a constraint to management practices and the problems generated are extremely difficult to overcome.

Other than the problems of accountability and comparison which have just been introduced, a problem of actual pupil accounting exists. The methods and procedures which have been set forth in the past to account for the pupils who are attending the Indian schools are entirely unsatisfactory. The decision-makers are hard put to make justifiable decisions when they don't know the details of population for which the decisions will affect.

The two problems of accountability which have been briefly presented above, evaluation (accountability of achievement) and pupil accounting (accountability of attendance), are the focus of this problem statement.

EVALUATION

During the past decade, evaluation has become a highly visible function in the educational processes. The literature is filled with techniques and procedures for evaluation. Consulting firms have quickly established departments for "evaluation" with "evaluation specialists"

as directors. The whole thrust of evaluation was probably brought about by the impact of large amounts of Federal funds made available to the schools. In all probability, the passage of the Elementary and Secondary Education Act of 1965 made the heaviest impact. Suffice to say at this point that none of the schemes which have been presented are the panacea. Nevertheless, evaluation procedures are more fully developed today than they were several years ago.

Perhaps the most effective evaluation procedures which have surfaced result from the development and implementation of systems of management by objectives; or a planning, programming, budgeting system (PPBS). Evaluation is an integral part of any such system for management by objectives.

The steps which should be taken in the development of any such a system are as follows:

- An Assessment of Needs
- Establishment of Goals and Objectives
- Planning for Implementation
- Operation
- Evaluation
- Recycling

A complete cycle from assessment through evaluation is commonly known as the education continuum.

(a) Assessment of Needs

The total administrative organization should be involved with the needs assessment from the pupils who are the actual recipients of

the process to the top administrator in the organization. Relevant services which are to be subsequently rendered should be included in the needs assessment including anticipated academic performances, physical characteristics, and others which are deemed important by the assessors. The assessment of needs should be categorized into a workable document with needs of similar characteristics being catalogued together. In the instance of this investigation, evaluation of pupil accomplishments and pupil accounting techniques are the foremost needs of the BIA at the present time.

(b) Establishment of Goals and Objectives

The needs which have been outlined above must now be translated into goals and objectives. For purposes of this paper, goals are defined as statements of purpose which communicate intended program objectives. Goals are not stated in time nor quantified by degree of attainment. Most school districts have such broad goal statements usually entitled philosophies of the school district, aims of the school district or some such general title. Goals are normally developed by the top levels of the administrative heirarchy and disseminated downward through the organization. BIA has an established goal which in effect states that "BIA will provide an education program for Indian pupils, the results of which will be equal to that enjoyed by other American pupils."

After the definition of the goals, the ensuing step is the definition of specific objectives. Objectives may be defined as a desired quantifiable accomplishment within a specific time framework. Each objective must relate to a specific goal, must be measurable, must

state the method of measurement, must indicate the evaluation criteria, and must state the time period for achievement. A project at the Chilocco Indian School under the direction of BIA personnel follows these guidelines and procedures. The project is known as Off Reservation Boarding Schools (ORBS).

Objectives then represent measurable achievements, the attainment of which advances the school in the direction of established goals. Documented objectives are almost nonexistent in school districts. Such is the observed case of BIA schools. Existing statements of philosophy, assumptions, or intent are not items of quantifiable nature, nor are they projected within a time frame. Integral to meaningful objectives are the evaluative criteria by which the effectiveness of programs in attaining objectives will be measured.

Meaningful program effectiveness will be the most difficult of problems encountered in the development of management by objectives. Very few, if any, systems and procedures are established in BIA for measurement other than standardized tests for measuring of performance in the basic educational areas such as computational skills and reading.

It is recognized that there are areas of the total educational process which are not, and some which cannot be, evaluated quantitatively. Most of these unique or special areas could be subjectively evaluated, but documented subjective evaluation is virtually nonexistent. There are very few successful subjective evaluation reports on file in most school districts. Although this is a difficult area requiring significant effort, there is general agreement among educators that generalized subjective

evaluative instruments are necessary and can be developed. A system of management by objectives holds promise of providing effective means to school operators in breaking the evaluation logjam.

(c) Planning for Implementation

After the needs, goals, and objectives have been clearly set forth, the problems related to the implementation of a program can be addressed. If the goal of BIA states that a program of education shall be provided for Indian pupils equivalent to all other American pupils, then specific incremental objectives directed toward this goal must be set forth. For example, one incremental objective might state that all Indian children should attain a standardized achievement test score at or near the national norms. The incremental objective should further state that this achievement should be accomplished prior to some future date.

Since all children may not achive the desired objective, planners should be realistic in setting objectives. Objectives should be updated, strengthened, and clarified during the course of the project or program.

In general, programs should be implemented which are directed toward the objectives or which provide additional support to progress toward the objective.

(d) Operation

After deciding which programs are required to meet the defined needs of the population and programs are developed to meet the objectives, operation is begun. Total resources--people, buildings, supplies, equipment, and management skills--can be focused on the objectives

(e) Evaluation

Evaluation must be both objective and subjective. Objective evaluation will be associated with a definitive type of measuring instrument such as an achievement test. During all of the furor concerning evaluation of pupil progress and the attainment of objectives over the past few years, much has been said and written regarding the effectiveness of standardized achievement tests to measure pupil achievement (i.e. evaluation). Sound basic arguments, both pro and con, have been presented.

On the one hand, opponents of standardized achievement tests contend that these tests are "equal" only for the white middle class American pupil; a universe on which the tests are standardized. Opponents also state that the tests are culturally biased. This is perhaps true. Another opposing view being expressed is that tests fail to cover many important areas of instruction. Tests, they contend, measure reading comprehension, arithmetic reasoning, arithmetic computation, and the like, but fail to measure the desire to read and calculate, prevent expressions of vocational expectations and self image, and frustrate creative information application. Still another argument proposes that test design may influence the pupil's success. A student's score on a test may be influenced significantly by how the questions are presented to him as well as by his ability to answer the questions themselves. Some test antagonists express the feeling that formulas of some measures are so difficult to comprehend, especially for younger pupils who are not "test wise," that the test merely measures the pupil's ability to take a

test. Instructions, to be sure, can stray from a "standard" since they are normally given by the classroom teacher and not a trained psycometrist. Test makers have tried to influence this factor of nonstandardization with printed instructions to be read for test administrators; however, these may often be overlooked by the busy teacher.

On the other hand, there are those proponents who maintain that standardized achievement tests are the only true objective instruments presently available. These tests, they argue, must be depended upon until such time as better and more reliable instruments can be developed. Rather than use nothing at all, it is logical to use that which is available for a specific purpose and carefully assess the results in light of the deficiencies.

In any discussion of standardized achievement tests and their use with restricted populations which may be considered culturally deprived in terms of the major culture, the theory of the development of a specific test to meet the specific needs of the group to be measured is advanced. The rationale of this approach has been countered with two arguments.

First, most school organizations feel that they cannot afford the amount of money necessary to go through the procedures of developing and proving a standardized test for a restricted population. Second, the use of such an individualized test eliminates the capability of comparing such special category students, such as Indian pupils, with students in the major culture.

In summary, the basic problems with standardized tests lie in misuse of results rather than deficiencies in the tests. Much of the

controversy can be overcome by insuring that tests and test results are properly used. In this regard, the uses of standardized tests as evaluation tools are being reviewed in detail by a BIA Task Force on Testing. This group will be developing guidelines for the selection, administration, and analysis of test instruments and procedures for reporting results.

Subjective evaluation is the type of yardstick which is most commonly used by society in general and, therefore, by schools. Subjective evaluation relates to one person's opinion of another. This type of evaluation can be further enhanced by the use of checklists, rating scales, and the like. Again there are proponents and opponents of subjective evaluation, but the arguments are not quite so strong as those concerning standardized tests. The weaknesses and inabilities of the evaluator are most often to blame for a poor evaluation. A good teacher can say whether a pupil is progressing in his normal way the same as a good school administrator can subconsciously rate his subordinates. This method can, however, lend itself to substantial criticism.

The uses of evaluation as a tool for improving educational programs were recently discussed by Sorenson*, in which he outlined eight basic principles of evaluation which are pertinent to the current problem. These principles are as follows:

> Principle 1. The purpose of any instruction program is to produce measurable changes in the students for whom it was designed; if these changes do not take place, something may be wrong with the program or how it was implemented.

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*Sorenson, G. "Evaluation for the Improvement of Instructional Programs: Some Practical Steps." Evaluation Comment, January, 1971 Vol. 2, No. 4, pp. 13-17.

Principle 2. For any instructional program, it is essential that the goals of the program--whether they involve knowledge, feelings, or attitudes--be defined in terms of performance, behavior, or actions.

Principle 3. Instructional procedures should be designed to fit the prestated goals--to teach the students the kinds of performance specified.

Principle 4. The program developer should follow a theory or model of instruction.

Principle 5. Instructional programs should be repeatable.

Principle 6. Instructional programs should be pretested.

Principle 7. Since any given instructional program will work more effectively with some students than with others, the formative evaluation plan should be designed to obtain information about the characteristics of the students, especially those who did not learn from the program.

Principle 8. Formative evaluation requires a particular array of roles, skills, and tolls which have not traditionally been employed in developing instruction programs.

These principles will provide an economical outcome if closely adhered to.

(f) Recycling

Throughout the processes of the five steps noted above, revision should occur as the need becomes apparent, particularly during the evaluation phase. Mistakenly, some educators who embark upon a system of management by objective wait until the end of the evaluation cycle, whether it be several months or several years, before they initiate the recycling procedure. Waiting deprives the system of the advantages of immediate update and process assessment which would be

available through immediate implementation. In addition, postponing identified corrections or changes may be economically unwise.

PUPIL ACCOUNTING

The student is, obviously, the central figure in any program developed for the educational system. His needs, as related to the communical and societal objectives, must be directly and effectively met. Specifically, the community direction and its relation to the major culture plus its own intrinsic goals must be considered in order to effectively set measures for Pupil Accounting. The U. S. Office of Education Handbooks set out the general framework for elements of a "model" approach. Certain other elements should also be included in the initial BIA approach. Following is a tentative listing of appropriate information applications for such a BIA Pupil Accounting structure:

1. Enrollment -- This is a wide ranging category which would include information concerning pupil entrance into the present situation, continued membership and withdrawal.

2. Class Scheduling -- Operational information concerning what subject options should be offered, the potential student loads, the space needs and limitations, personnel availability and any special requirements.

3. Class Lists -- A functional capability of the systems used to generate listings of the students in specific class locations.

4. Pupil Attendance -- An ongoing, continual up-date of specific membership of a school organization by pupil count.

5. Grade Reporting -- A permanent record file of grading of student progress reportable in specific (student) or global (class, school, unit, universe) terms.

6. Test Scoring and Analysis -- At critical issue in this element is the development of a reporting procedure that provides essential learning diagnostic information on a timely basis and at the same time provides operational diagnostics for effective management. Situational environments, individual goals and consideration of community goals must be included in interpretative analyses of this data.

7. Student Activities -- The relationships between the academic progress of a student and the exposure to ancillary activities has been clearly established. Activities that directly or indirectly bear on the attainment of individual and community objectives should be relevant for inclusion in this reporting process.

8. Bus Scheduling -- Consideration of the transportation of students as part of the entire educational process is essential. Attitudes, external concerns and community concerns must be considered along with the economic requirements. A process that incorporates all the issues and deals with total requirements is needed.

9. Permanent Student Records File -- The student records transfer project is addressed to this specific issue. The standardization of data and uniformity of reporting is essential to development of an operational approach. Once permanent, uniform records are established, the total task of student identification and progress reporting is simplified.

10. Records Management -- As part of any Pupil Accounting system, a concise training program in the implementation, maintenance and updating of the records is essential. All persons engaged in the assembly or handling

of student data must be well versed in the uniform processes developed. A continuing program for keeping the operational personnel informed must be instituted.

VI - DEVELOPMENT OF AN EDUCATIONAL INFORMATION PROGRAM

TECHNICAL APPROACH

Basic to the implementation of a sophisticated system of management by objective is a process which establishes a discipline for collecting, handling, and reporting data. As in the case of management by objective, the literature is filled with studies, conceptualizations, and approaches to the development of a viable management information system, or as it is commonly called, MIS. Some efforts are obviously being made toward the development of such a system for the Indian schools; however, an apparent lack of comprehensive planning is evident.

Certain parts of such a system are being developed. For example, a total Financial sub-system has been implemented which can form one of the key elements for a total system. Some information concerning Staff is also available. The staff information is resident in employee files but does not have the capability of being accumulated into a more adequate file of educational information. In addition, some Facility data with limited information concerning property management is available. To a lesser degree, Community Profile information is available. In general, the Community Profile information covers census characteristics and does not contain data on tribal roles or tribal lands. Considerable work would be necessary to collect and analyze the data for a usable information source.

A Program or Curriculum sub-system (course offerings, professionals, materials, programs support) has not been developed at this time.

This sub-system must be considered along with the other parts of the total system. After the Pupil Accounting sub-system has been generated as a first priority, the Program or Curriculum sub-system must be constructed.

From the investigations and fact finding conducted during this study, it is quite apparent that the sub-systems which will serve BIA to the greatest advantage, while earnest efforts are being made to set up a viable evaluation system, are the finance sub-system and the pupil sub-system. However, a viable evaluation system would be extremely difficult to realize without a solid financial and pupil base. The data elements normally maintained in these sub-systems are uniquely important to evaluation.

FINANCIAL ACCOUNTING SUB-SYSTEM

It has previously been mentioned that the Bureau of Indian Affairs, through its Data Center located in Albuquerque, New Mexico, has concentrated its systems efforts in administrative applications such as payroll and financial accounting. At the time of this report negotiations were well underway between representatives of the Director, Office of Education Programs, and the Director, Fiscal Plans and Management, to implement educational information requirements in the proposed revised BIA financial accounting systems. Agreements have been reached by these parties concerning the necessary revised coding structure required by education programs and it is assumed that these changes will take place as scheduled by July 1, 1972.

PUPIL ACCOUNTING SUB-SYSTEM

The pupil sub-system is somewhat different from other data files in that there are substantially more data elements to be included in the sub-system. The needs and wishes of the decision-makers should be foremost in the selection of the elements since numbers of elements are almost infinite. In the particular case of BIA, efforts are currently being made by Mr. Wall in the Albuquerque Area Office of BIA to develop a Student Record Transfer System (SRTS). The data elements detailed therein are the ones that are felt to be needed most by the users. It appears at this time that the membership and attendance elements included in the proposed file are essential to accountability and evaluation needs of all administrative levels of the BIA. The elements which Wall has proposed, and most certainly agreed with in this study, are as follows:

Social Security Number
Surname
First Name
Middle Name
Suffix
Nickname/Diminutive
Sex
Birthdate
Verification of Birthdate
Home Address
Female Head of Household
Relationship
Male Head of Household
Relationship
Tribe
Family Number
Tribal Enrollment Number
Language Spoken in Home
Enrollee's Rank in Family
Religious Preference
Authority for Stated Religious Preference

Agency
School
Teacher
Room Assigned
Year/Level/Grade
Type of Student: Walk-Bus-Board
Type of School: On, Off, Public, Mission
Type of Program: K-III, Jr. High, Non-Graded Primary
Dorm Eligibility: Isolation, Social, Academic
Bus Route and Stop
Attendance:
School Membership this School Year to Date
School Attendance this School Year to Date
Same for Four Previously Attended Schools
Full School Year's Equivalence of Attendance
Dormitory Membership this School, This Year to Date
Dormitory Attendance this School, This Year to Date

These elements compare favorably with those agreed upon for a migrant information transfer system which was funded by a Federal grant and developed at the University of Arkansas in 1970.

In any discussion of systems and their development the problem of method arises. The Indian Affairs Data Center, located in Albuquerque, New Mexico, is making some strides forward in the collection and storing of data. The Center is a well-established and highly competent operation involved primarily in operational activities such as payroll, financial accounting, and other administrative applications. With current hardware and personnel, the Center currently appears to have the capability to handle pupil data with little further effort, particularly pupil accounting and test-scoring applications.

As far-flung and disbursed as the Indian schools are, the cost of on-line transmission between them and the computer center would be prohibitive. U. S. mail or courier service delivery of the data from the Center to the user would provide sufficient lead-time for decisions

which need to be made. At the present time BIA area offices have encoder capabilities. There is a possibility that each area will serve as a receiving base from IADC; however, it appears that this approach is not immediately feasible because of distances and cost.

This investigation has revealed that most needs of BIA would be met with a pupil attendance reporting system which would provide hard copy reports to the Director of Education Programs on a monthly or quarterly basis. Such a system is viable as well as economical, and the scope is such that present facilities would not need to be extended.

In general terms, the evaluation system and the pupil accounting system should be introduced into the records of BIA with all possible haste. A suggested outline of implementation considerations will be presented in the next section.

PROPOSED IMPLEMENTATION PLAN

By following the suggested steps listed below, BIA can soon achieve the recommendations of this paper.

(a) Office of Education Programs suggested recoding for the financial management sub-system should be programmed and completed early in Fiscal Year 1973.

(b) Elements of data suggested in SRTS should be collected in the fall of 1972 and made a part of the permanent pupil record system shortly thereafter.

(c) Plans should be developed and implemented immediately (summer 1972) for collecting pupil enrollment and attendance information

using manual reporting procedures. Quarterly reports will suffice until such time as the sub-system is refined so that monthly reports can be produced.

(d) Plans should be made to administer an appropriate standardized achievement test to all pupils in attendance at Indian schools during the 1972-73 school year. A pre-test in early fall and a post-test in late spring are highly recommended. Regardless of the arguments that current instruments are biased in favor of middle class white American children, these are all that are available currently. They should be used for evaluation and comparison until such time as better instruments are developed.

(e) Manual procedures for pupil accounting presently exist at the school, agency and area levels of BIA education. However, there is no uniformity in the terminology used. In the interim prior to future automation, new forms and procedures should be developed utilizing standard terminology. Each Assistant Area Director should serve on a committee to develop and agree on the standard terms. USOE Handbooks are recommended as a base for this standard terminology.

(f) In addition to standard terms about pupils, work should commence immediately to develop uniform terminology on curriculum. This is the vital link in any MIS effort. It is the single information area which touches on all the other sub-systems; finance, pupils, staff, property and community.

(g) Work should begin on the preparation of standardized rating scales, post-graduate examinations, and standardized check lists to further enhance the evaluation process.

With the above recommendations, the BIA will be well on its way to establishing a satisfactory evaluation and pupil accounting system.

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The researcher takes this opportunity to express his appreciation to Mr. Jerry N. Waddell and Dr. Tom Hopkins of BIA and to GAO for their assistance in the collection of background information and fact finding for the above effort.

He hopes that suggestions and recommendations made herein will assist and direct the upgrading of education for American Indian children.

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RESEARCH AND EVALUATION REPORT SERIES

The Education activity of the BIA has always produced a large and steady number of very useful reports. In recent time, there seems to be an increasingly larger number of high quality reports. Too, throughout the years, there has not been an attempt to organize or arrange the reports in such a manner that they become a useful and systematic body of information. In order to provide a systematic arrangement of high quality reports so that they may be made available to BIA educators, a Research and Evaluation Report Series has been established by the Indian Education Resources Center (IERC), Division of Evaluation and Program Review.

The general objectives of the Series are to:

(1) Provide a systematic arrangement of education reports.
(2) Identify those reports considered to be high in quality.
(3) Make pertinent data available to BIA educators and when possible, to educators outside the BIA.
(4) Make it possible for professional educators involved in research pertinent to the schooling of Indian children to share their experiences with a greater audience.
(5) Assist in the overall evaluation process of the BIA Education activity.